

CLAIMS

1. A content reproduction control system comprising a server apparatus and a terminal apparatus that are connected to each other via a communication path,

wherein the server apparatus includes:

a control information generation unit operable to generate, based on time information attached to a content, control information which specifies a range for permitting and prohibiting a user's predetermined operation on the content performed in the terminal apparatus; and

a distribution unit operable to distribute the control information to the terminal apparatus, and

the terminal apparatus includes:

a content use unit operable to use the content;

a receiving unit operable to receive the control information;

and

a content use control unit operable to control a reproduction of the content based on the received control information, the reproduction being included in the use of the content performed by the content use unit.

2. The content reproduction control system according to Claim 1,

wherein the control information indicates a section where a special reproduction of the content is prohibited.

3. The content reproduction control system according to Claim 1,

wherein the control information indicates a section where only a normal reproduction of the content is permitted.

4. The content reproduction control system according to Claim 1,
wherein the control information indicates a section where a preview of the content is permitted.

5. The content reproduction control system according to Claim 1,
wherein the time information is a value of the time information attached to the content.

6. The content reproduction control system according to Claim 5,
wherein the time information is composed, based on at least one of a Program Clock Reference of a Transport Stream, a Presentation Time Stamp of a Packetized Elementary Stream, and a Decoding Time Stamp of the Packetized Elementary Stream.

7. The content reproduction control system according to Claim 1,
wherein the time information is composed of time information about a beginning of the content and time information about an offset from the beginning of the content.

8. The content reproduction control system according to Claim 7,
wherein the time information is composed based on at least one of a Program Clock Reference of a Transport Stream, a Presentation Time Stamp of a Packetized Elementary Stream, and a Decoding Time Stamp of the Packetized Elementary Stream.

9. The content reproduction control system according to Claim 1,

wherein the receiving unit receives the control information by broadcasting from the server apparatus.

10. The content reproduction control system according to Claim
5 9,

wherein the control information is issued for a user's contract and assigned to either a main license indicating a license which allows use of a plurality of contents under the contract or a sublicense indicating a license issued for a single content.

10 11. The content reproduction control system according to Claim 1,

wherein the receiving unit receives the control information through communication with the server apparatus.

15 12. The content reproduction control system according to Claim 9,

wherein the control information is issued for a user's contract and assigned to either a main license indicating a license which
20 allows use of a plurality of contents under the contract or a sublicense indicating a license issued for a single content.

13. The content reproduction control system according to Claim
1,

25 wherein the control information includes a type of the permitted operation.

14. The content reproduction control system according to Claim
1,

30 wherein the control information includes at least one of, for until a specific operation is permitted, a number of viewings, viewing time and a viewing validity period.

15. The content reproduction control system according to Claim 14,

wherein the specific operation is one of a commercial message skip, a commercial message fast-forward and a commercial message rewind.

16. The content reproduction control system according to Claim 1,

wherein the control information includes a limit concerning a permitted number of operations or permitted time.

17. The content reproduction control system according to Claim 16,

wherein the permitted operation is a preview of the content.

18. The content reproduction control system according to Claim 1,

wherein the control information is issued for a user's contract and includes a license ID that specifies either a main license indicating a license which allows use of a plurality of contents under the contract or a sublicense indicating a license which is issued for a single content.

19. The content reproduction control system according to Claim 1,

wherein the content use control unit controls use of the content so that the predetermined operation cannot be operated when the control information is not yet obtained.

20. The content reproduction control system according to Claim 1,

wherein the terminal apparatus further includes

a viewing record recording unit operable to record a viewing record including a viewed portion of the content, and

the content use control unit controls use of the content in the content use unit using the control information and the viewing record.

21. The content reproduction control system according to Claim 20,

wherein the content use control unit controls a permission for a special reproduction of the content to permit a special reproduction of the content when an amount of the viewing records exceeds a limit of the amount of the viewing records which can be included in the control information.

22. The content reproduction control system according to Claim 1,

wherein the control information generation unit predicts a value of time information and generates the control information when the content is a stream type content.

23. The content reproduction control system according to Claim 1,

wherein the control information generation unit generates, when the content is a stream type content, the control information after a delivery of the content is started.

24. The content reproduction control system according to Claim 23,

wherein the control information generation unit further generates control information only including a beginning time of a distribution of the content, and

the distribution unit distributes the generated control

information after the distribution of the control information which excludes the generated control information.

25. The content reproduction control system according to Claim
5 1,

wherein the control information generation unit generates, when the content is a file type content, the control information using time information after a value is defined.

10 26. The content reproduction control system according to Claim
1,

wherein the control information is assigned at least to one of a content key (Kc) distribution Entitlement Control Message (ECM), an Entitlement Control Message-work key (ECM-Kw) and an
15 Entitlement Control Message-content key (ECM-Kc) for digital broadcasting.

27. The content reproduction control system according to Claim
26,

20 wherein different control information are assigned respectively to the ECM-Kw and the Kc distribution ECM.

28. The content reproduction control system according to Claim
26,

25 wherein different control information are assigned respectively to the ECM-Kw and the ECM-Kc.

29. The content reproduction control system according to Claim
1,

30 wherein a portion of the predetermined operation that is permitted or prohibited is different between two cases: when the content is viewed in a real time; and when the content is stored and

viewed.

30. A server apparatus in a content reproduction control system comprising the server apparatus and a terminal apparatus that are
5 connected to each other via a communication path, comprising:

a control information generation unit operable to generate, based on time information attached to the content, control information which specifies a range for permitting or prohibiting a user's predetermined operation on a content in the terminal
10 apparatus; and

a distribution unit operable to distribute the control information to the terminal apparatus.

31. A terminal apparatus in a content reproduction control system comprising a server apparatus and the terminal apparatus that are
15 connected to each other via a communication path, comprising:

a content use unit operable to use a content;

a receiving unit operable to receive control information; and

a content use control unit operable to control a reproduction
20 of the content based on the received control information, the reproduction being included in the use of the content performed by the content use unit,

wherein the control information is information which specifies, based on time information attached to the content, a range for
25 permitting or prohibiting a user's predetermined operation on the content in the terminal apparatus.

32. A content reproduction control method used for a content reproduction control system comprising a server apparatus and a
30 terminal apparatus that are connected to each other via a communication path, the method including steps A executed in the server apparatus and steps B executed in the terminal apparatus,

wherein the steps A include steps of:

generating control information that generates, based on time information attached to the content, control information which specifies a range for permitting or prohibiting a user's predetermined operation on a content in the terminal apparatus;
5 and

distributing the control information to the terminal apparatus, the steps B include steps of:

using the content; and

10 controlling a reproduction of the content based on the received control information, the reproduction being included in the use of the content.